FIG. 1

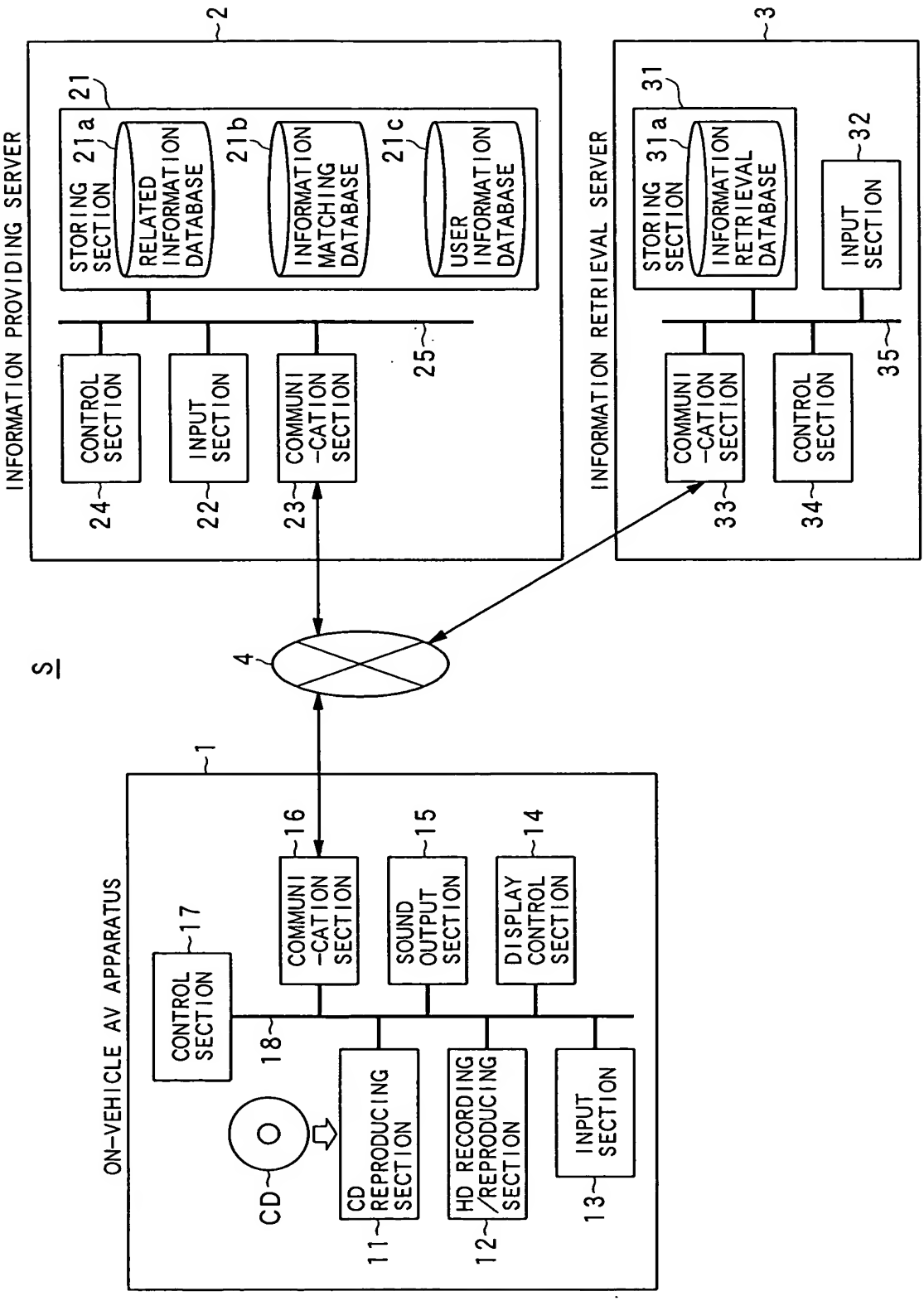

S
INFORMATION PROVIDING SERVER
2
STORING SECTION
21
21a
RELATED INFORMATION DATABASE
21b
INFORMATION MATCHING DATABASE
21c
USER INFORMATION DATABASE
CONTROL SECTION
24
INPUT SECTION
22
COMMUNI-CATION SECTION
23
25
INFORMATION RETRIEVAL SERVER
3
STORING SECTION
31
31a
INFORMATION RETRIEVAL DATABASE
INPUT SECTION
32
COMMUNI-CATION SECTION
33
CONTROL SECTION
34
35
4
ON-VEHICLE AV APPARATUS
1
CONTROL SECTION
17
18
COMMUNI-CATION SECTION
16
SOUND OUTPUT SECTION
15
DISPLAY CONTROL SECTION
14
CD
CD REPRODUCING SECTION
11
HD RECORDING /REPRODUCING SECTION
12
INPUT SECTION
13

FIG. 2

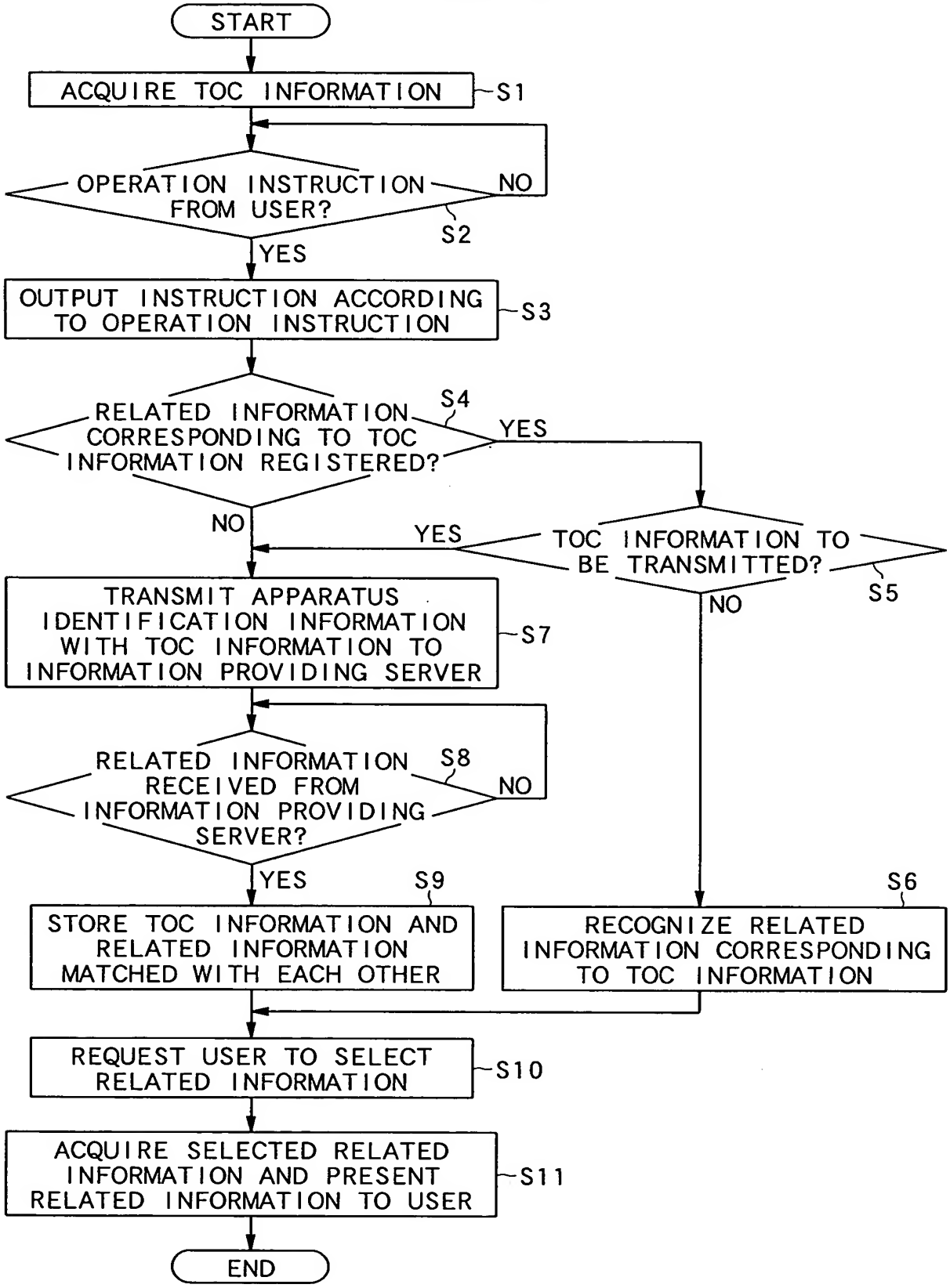

START
ACQUIRE TOC INFORMATION
S1
OPERATION INSTRUCTION FROM USER?
NO
S2
YES
OUTPUT INSTRUCTION ACCORDING TO OPERATION INSTRUCTION
S3
RELATED INFORMATION CORRESPONDING TO TOC INFORMATION REGISTERED?
S4
YES
NO
TOC INFORMATION TO BE TRANSMITTED?
YES
S5
NO
TRANSMIT APPARATUS IDENTIFICATION INFORMATION WITH TOC INFORMATION TO INFORMATION PROVIDING SERVER
S7
RELATED INFORMATION RECEIVED FROM INFORMATION PROVIDING SERVER?
S8
NO
YES
S9
STORE TOC INFORMATION AND RELATED INFORMATION MATCHED WITH EACH OTHER
S6
RECOGNIZE RELATED INFORMATION CORRESPONDING TO TOC INFORMATION
REQUEST USER TO SELECT RELATED INFORMATION
S10
ACQUIRE SELECTED RELATED INFORMATION AND PRESENT RELATED INFORMATION TO USER
S11
END

FIG. 3A

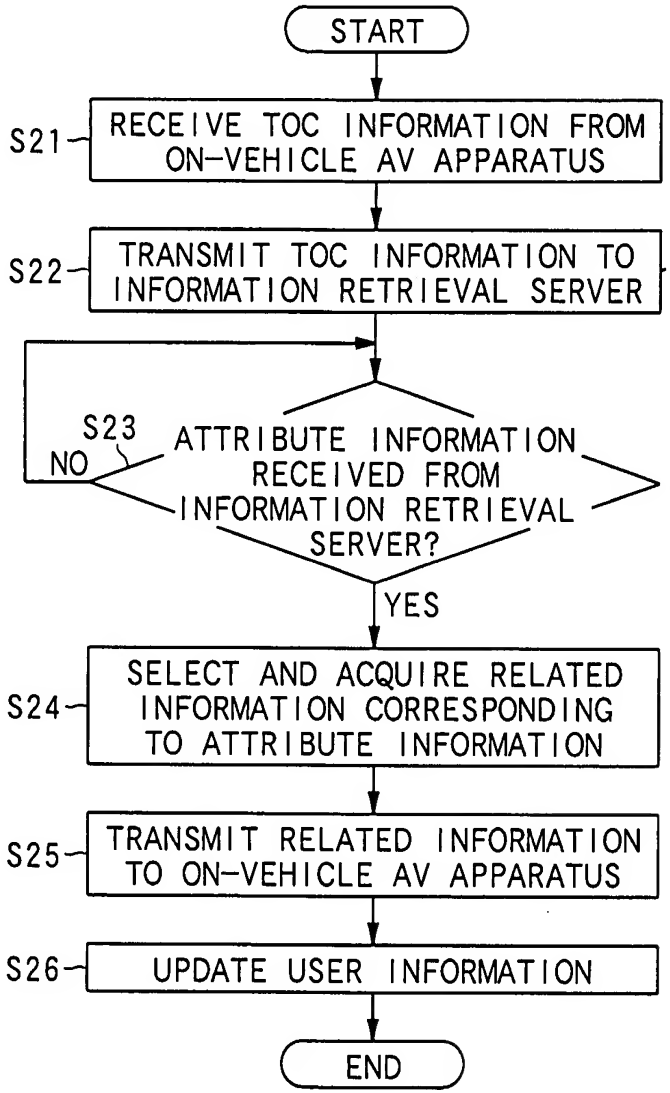

START
S21
RECEIVE TOC INFORMATION FROM ON-VEHICLE AV APPARATUS
S22
TRANSMIT TOC INFORMATION TO INFORMATION RETRIEVAL SERVER
S23
NO
ATTRIBUTE INFORMATION RECEIVED FROM INFORMATION RETRIEVAL SERVER?
YES
S24
SELECT AND ACQUIRE RELATED INFORMATION CORRESPONDING TO ATTRIBUTE INFORMATION
S25
TRANSMIT RELATED INFORMATION TO ON-VEHICLE AV APPARATUS
S26
UPDATE USER INFORMATION
END

FIG. 3B

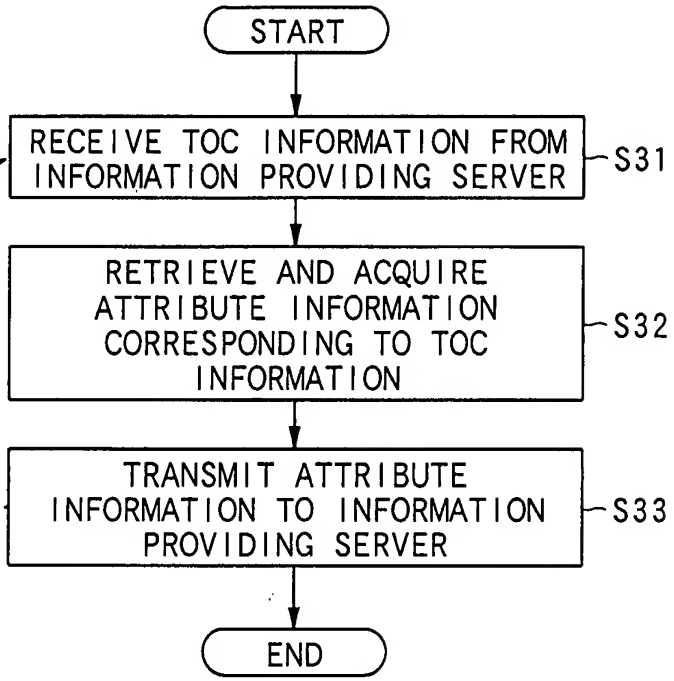

START
RECEIVE TOC INFORMATION FROM INFORMATION PROVIDING SERVER
S31
RETRIEVE AND ACQUIRE ATTRIBUTE INFORMATION CORRESPONDING TO TOC INFORMATION
S32
TRANSMIT ATTRIBUTE INFORMATION TO INFORMATION PROVIDING SERVER
S33
END

FIG. 4

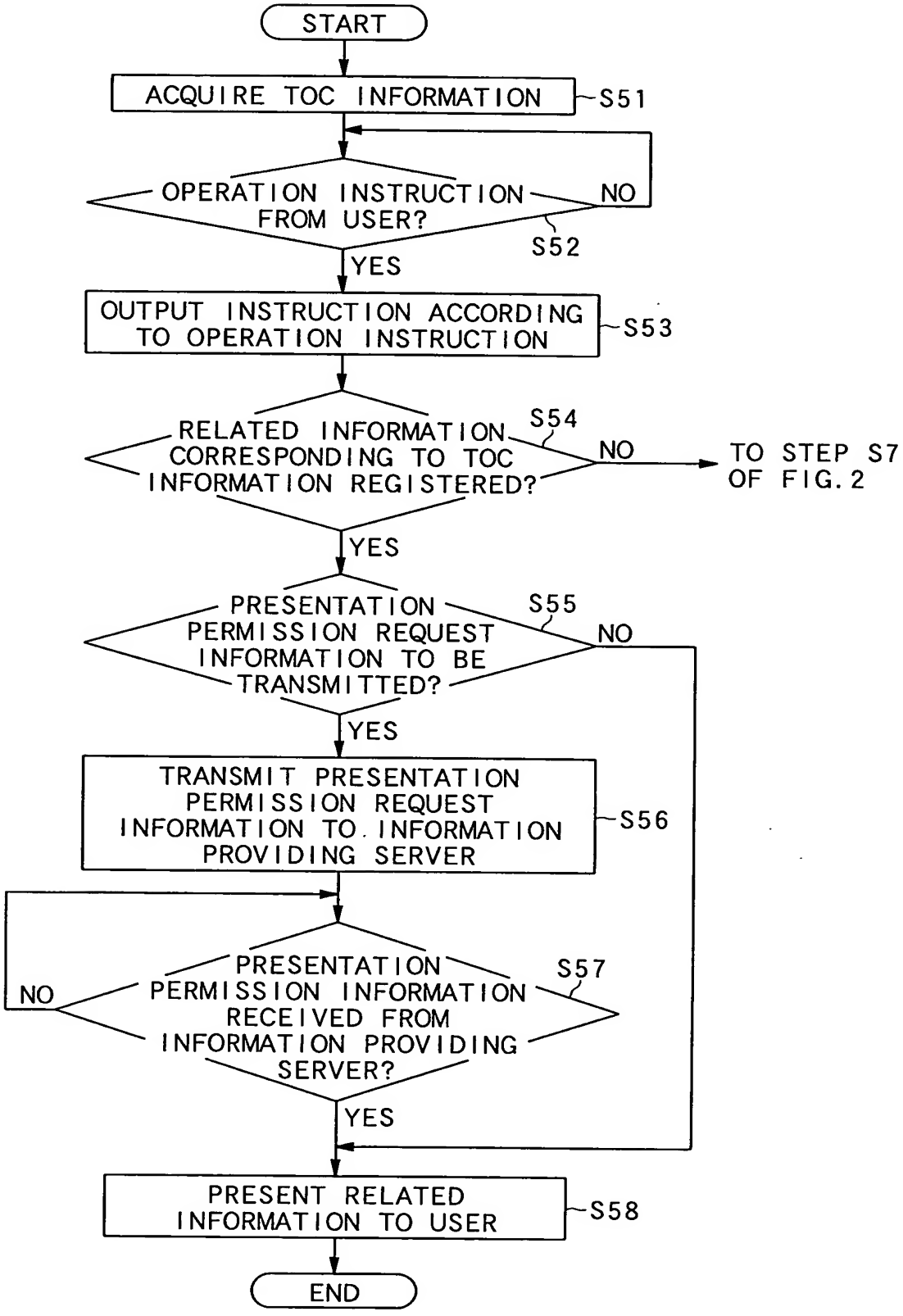

START
ACQUIRE TOC INFORMATION
S51
OPERATION INSTRUCTION FROM USER?
NO
S52
YES
OUTPUT INSTRUCTION ACCORDING TO OPERATION INSTRUCTION
S53
RELATED INFORMATION CORRESPONDING TO TOC INFORMATION REGISTERED?
S54
NO
TO STEP S7 OF FIG. 2
YES
PRESENTATION PERMISSION REQUEST INFORMATION TO BE TRANSMITTED?
S55
NO
YES
TRANSMIT PRESENTATION PERMISSION REQUEST INFORMATION TO INFORMATION PROVIDING SERVER
S56
PRESENTATION PERMISSION INFORMATION RECEIVED FROM INFORMATION PROVIDING SERVER?
S57
NO
YES
PRESENT RELATED INFORMATION TO USER
S58
END

FIG. 5

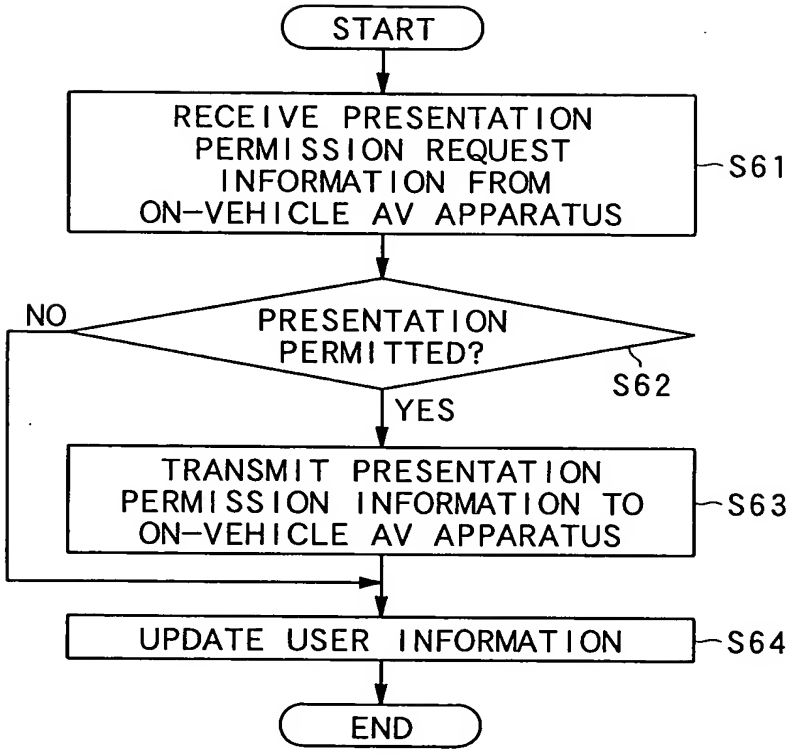

START
RECEIVE PRESENTATION PERMISSION REQUEST INFORMATION FROM ON-VEHICLE AV APPARATUS
S61
PRESENTATION PERMITTED?
S62
NO
YES
TRANSMIT PRESENTATION PERMISSION INFORMATION TO ON-VEHICLE AV APPARATUS
S63
UPDATE USER INFORMATION
S64
END

FIG. 6

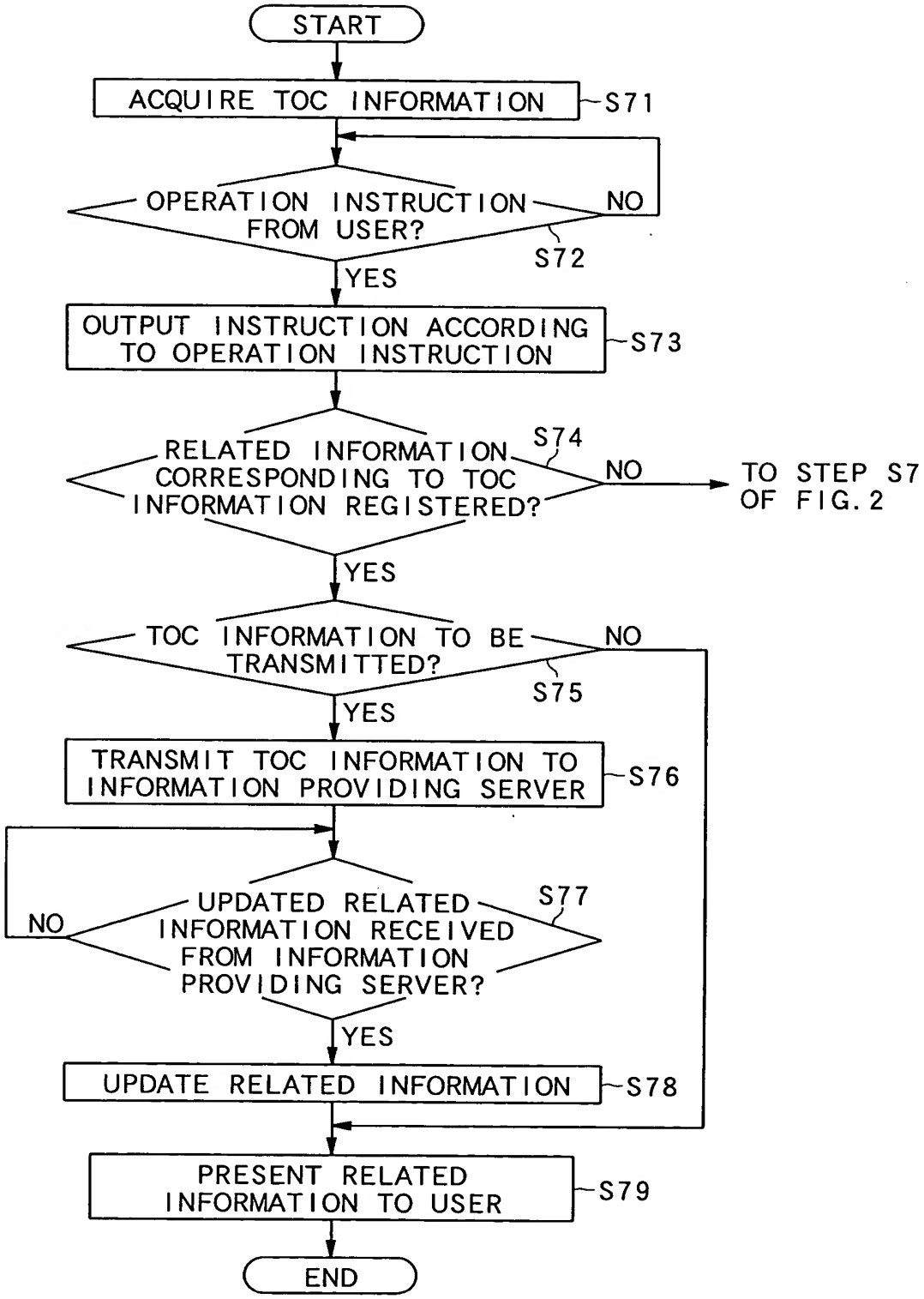

START
ACQUIRE TOC INFORMATION
S71
OPERATION INSTRUCTION FROM USER?
NO
S72
YES
OUTPUT INSTRUCTION ACCORDING TO OPERATION INSTRUCTION
S73
RELATED INFORMATION CORRESPONDING TO TOC INFORMATION REGISTERED?
S74
NO
TO STEP S7 OF FIG. 2
YES
TOC INFORMATION TO BE TRANSMITTED?
NO
S75
YES
TRANSMIT TOC INFORMATION TO INFORMATION PROVIDING SERVER
S76
UPDATED RELATED INFORMATION RECEIVED FROM INFORMATION PROVIDING SERVER?
S77
NO
YES
UPDATE RELATED INFORMATION
S78
PRESENT RELATED INFORMATION TO USER
S79
END

FIG. 7

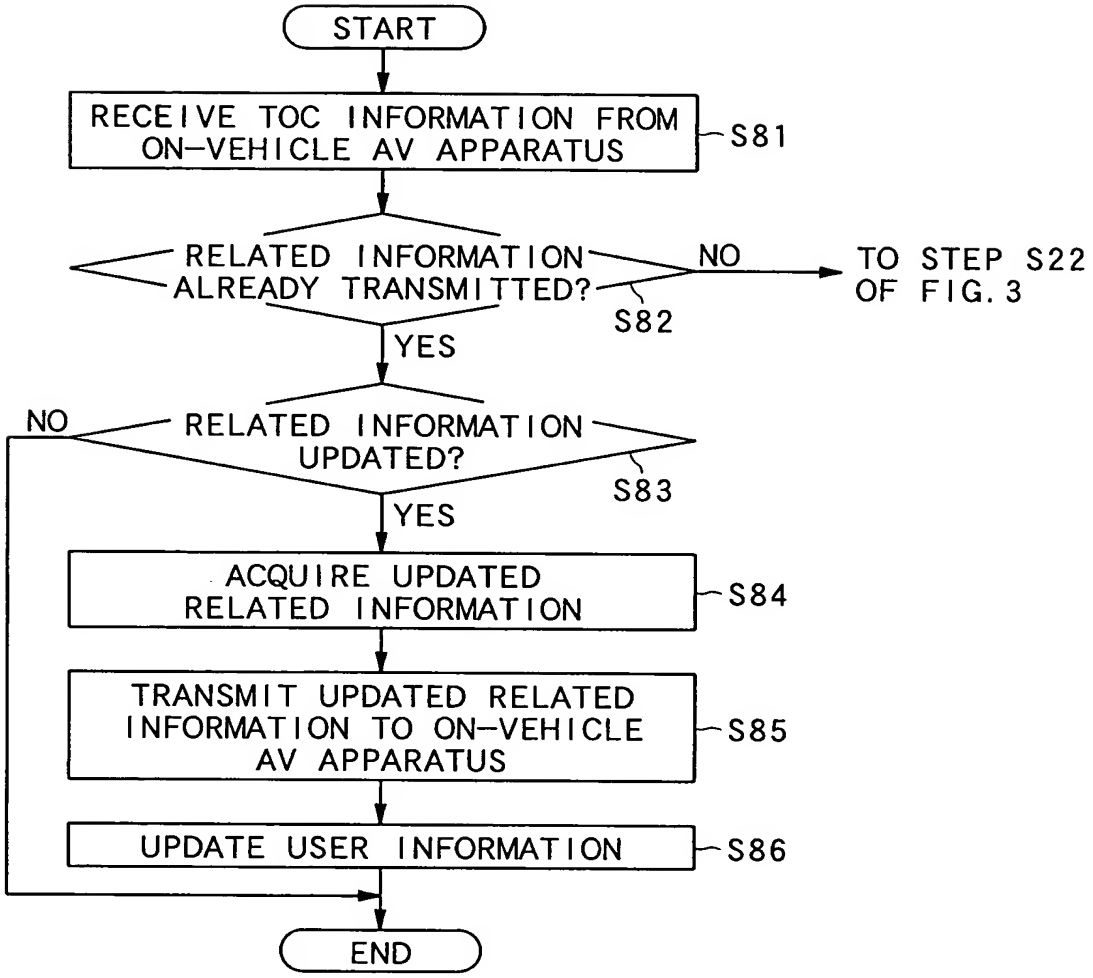

START
RECEIVE TOC INFORMATION FROM ON-VEHICLE AV APPARATUS
S81
RELATED INFORMATION ALREADY TRANSMITTED?
NO
TO STEP S22 OF FIG. 3
S82
YES
NO
RELATED INFORMATION UPDATED?
S83
YES
ACQUIRE UPDATED RELATED INFORMATION
S84
TRANSMIT UPDATED RELATED INFORMATION TO ON-VEHICLE AV APPARATUS
S85
UPDATE USER INFORMATION
S86
END

FIG. 8

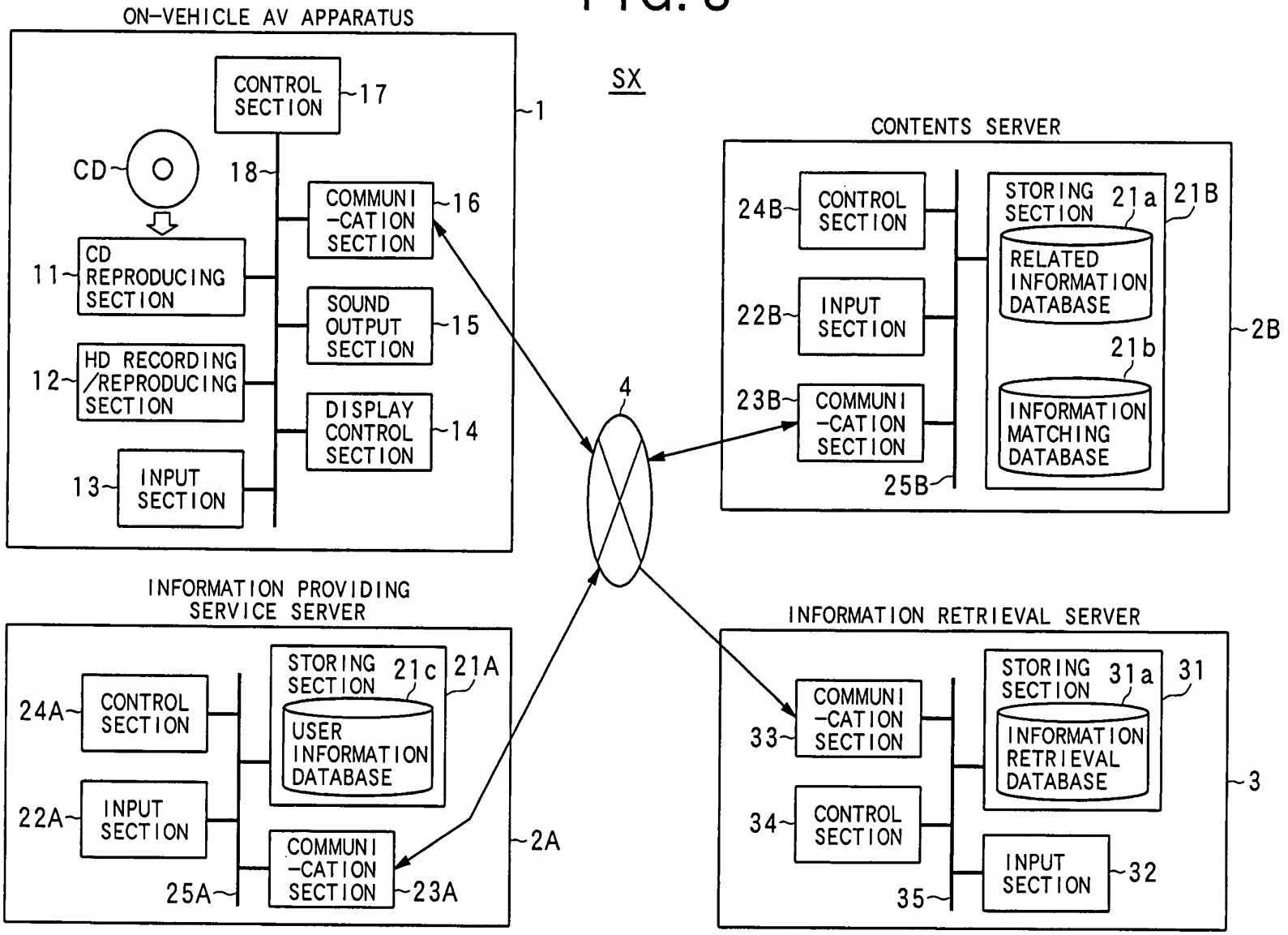
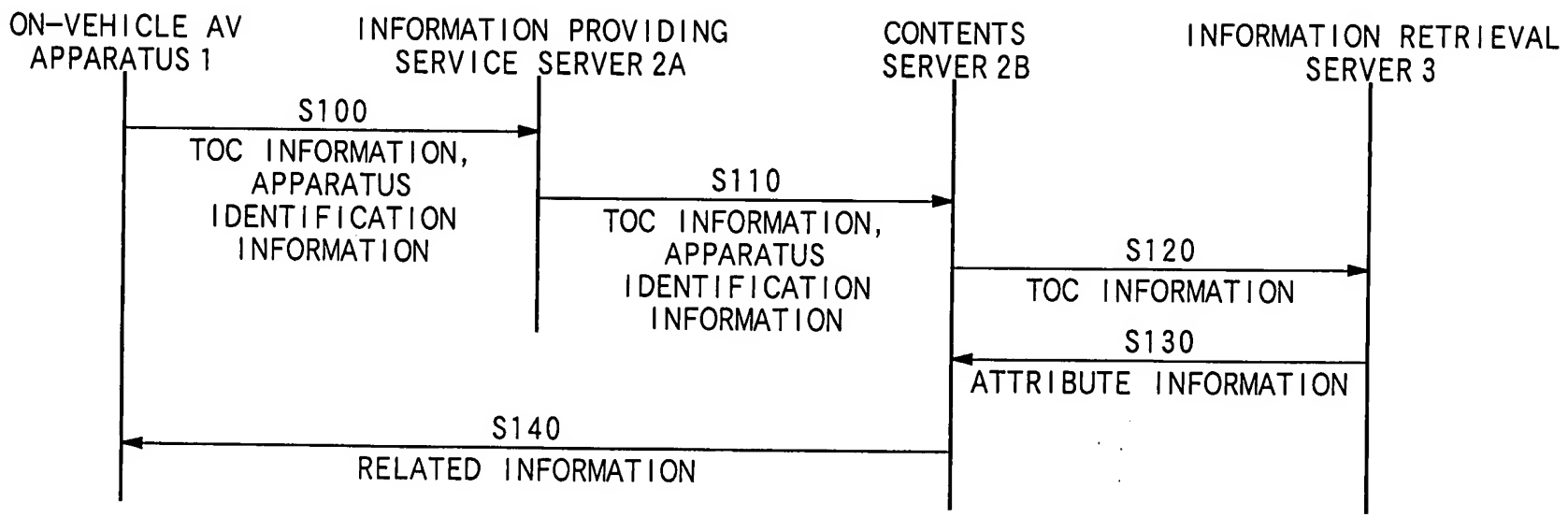

SX
ON-VEHICLE AV APPARATUS
CONTROL SECTION
17
1
CD
18
COMMUNI-CATION SECTION
16
CD REPRODUCING SECTION
11
SOUND OUTPUT SECTION
15
HD RECORDING /REPRODUCING SECTION
12
DISPLAY CONTROL SECTION
14
INPUT SECTION
13
4
CONTENTS SERVER
24B
CONTROL SECTION
STORING SECTION
21a
21B
RELATED INFORMATION DATABASE
22B
INPUT SECTION
21b
2B
23B
COMMUNI-CATION SECTION
INFORMATION MATCHING DATABASE
25B
INFORMATION PROVIDING SERVICE SERVER
STORING SECTION
21c
21A
24A
CONTROL SECTION
USER INFORMATION DATABASE
22A
INPUT SECTION
COMMUNI-CATION SECTION
2A
25A
23A
INFORMATION RETRIEVAL SERVER
STORING SECTION
31a
31
33
COMMUNI-CATION SECTION
INFORMATION RETRIEVAL DATABASE
3
34
CONTROL SECTION
INPUT SECTION
32
35

FIG. 9


ON-VEHICLE AV APPARATUS 1
INFORMATION PROVIDING SERVICE SERVER 2A
CONTENTS SERVER 2B
INFORMATION RETRIEVAL SERVER 3
S100
TOC INFORMATION, APPARATUS IDENTIFICATION INFORMATION
S110
TOC INFORMATION, APPARATUS IDENTIFICATION INFORMATION
S120
TOC INFORMATION
S130
ATTRIBUTE INFORMATION
S140
RELATED INFORMATION